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A new species of *Dorstenia* (Moraceae) from southeastern Brazil

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Abstract

Dorstenia stellaris is a new species from southeastern Brazil. This species is endemic to the region and differs from the others by its star shaped coenanthium and cordiform leaves. A description and illustration of this species is presented here. *Dorstenia stellaris* is found in moist and shady places, in small populations within the type locality, thus we recommend its inclusion in the endangered (EN) status of conservation.

Resumo

Dorstenia stellaris é uma espécie nova do sudeste do Brasil. A espécie é endêmica da região e difere-se das demais, pelo cenanto estrelado e folha com base cordada. Neste trabalho foi apresentada descrição e ilustração da espécie. *Dorstenia stellaris* é encontrada em locais úmidos e sombreados, em pequenas populações, somente na localidade típica, desta forma, recomendamos sua categorização como em perigo.

Keywords

Atlantic forest, Mantiqueira, Pindamonhangaba

Introduction

Dorstenia was described by Carl Linnaeus (1753), and differs from the other Moraceae genera by the presence of rhizomes, herbaceous and sometimes succulent habit and patelliform inflorescences, the coenanthium. It is the second largest genus in the Moraceae, ca. 105 species distributed through Africa and neotropics, with one species

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extending into Asia. Brazil holds about 37 species, with the majority of these species Brazilian endemics (Romaniuc Neto et al. 2010).

The great number of species and morphological variation in this genus is reflected by numerous infrageneric groups established by Berg and Hijman (1999). The authors proposed the subdivision of the genus into 9 sections, three of which (*Lecanium*, *Dorstenia* and *Emygdioa*) occur within the neotropical region. *Dorstenia stellaris* is placed in *Lecanium* section, being characterized mostly by showing camephytes and nanophanerophytes species with simple leaves, subulate or foliaceous stipules, and an entire coenanthium.

Dorstenia is the only genus in the family that shows an herbaceous habit and its populations often tend to occupy restricted areas with favorable ecological niches. *D. stellaris* is endemic to Mantiqueira Ridge area and has a restricted distribution, being found only on its type locality, in the municipality of Pindamonhangaba. This species occurs in small populations along moist and shady areas.

Taxonomic treatment

***Dorstenia stellaris* A. Sant. & Romaniuc, sp. nov.**
urn:lsid:ipni.org:names:77119223-1
http://species-id.net/wiki/Dorstenia_stellaris
Fig. 1 A–D; Fig. 2

Diagnosis. Coenanthium ellipticum, irregulariter stellatum et lamina basis cordiformis differt.

Type. BRASIL. São Paulo, Pindamonhangaba, distrito de Ribeirão Grande, near Fazenda São Sebastião do Ribeirão Grande, 26 Nov. 2011, A. Santos et al. 142 (Holotype: SP!); Brasil. São Paulo, Pindamonhangaba, distrito de Ribeirão Grande, Fazenda São Sebastião do Ribeirão Grande, 30 Mar. 1994, I. Cordeiro et al. 1323 (Paratype: SP!); São Paulo, Pindamonhangaba, distrito de Ribeirão Grande, near Fazenda São Sebastião do Ribeirão Grande, 26 Nov. 2011, A. Santos et al. 143, 144, 145, 146 (Paratype: SP!).

Description. Camephytes 30–70 cm tall; stems aerial, erect, hirsute to tomentose; internodes 1–2.5 cm long.; latex white and abundant. Stipules 1–2 mm long., subulate, narrowly triangular, ciliate, persistent to deciduous, hairs white. Leaves distichous to whorled; blade 8–12 × 3.5–5 cm, membranaceous, apex long acuminate, base cordate, adaxial side scabrous, hairs sparse, white, abaxial side puberulous to hirsute, hairs gathered on the veins; margins entire to denticulate; petiole 2.5–5 cm long., hirsute; brochidodromous venation; 5–6 pairs of secondary veins; tertiary veins scalariform. Coenanthium elliptic, 1–2 cm diam., pateliform, stellate, 3–5 angulate, puberulous; margin with sessile bracts, 0.5–1 mm long., mostly on the angle apex, puberulous, fringes 0.5–0.7 mm alt., greenish to vinaceous; peduncle 1.5–2.5 cm long., puberulous. Staminate flowers distributed through the whole coenanthium; stamens 2; perianth 2 lobed.

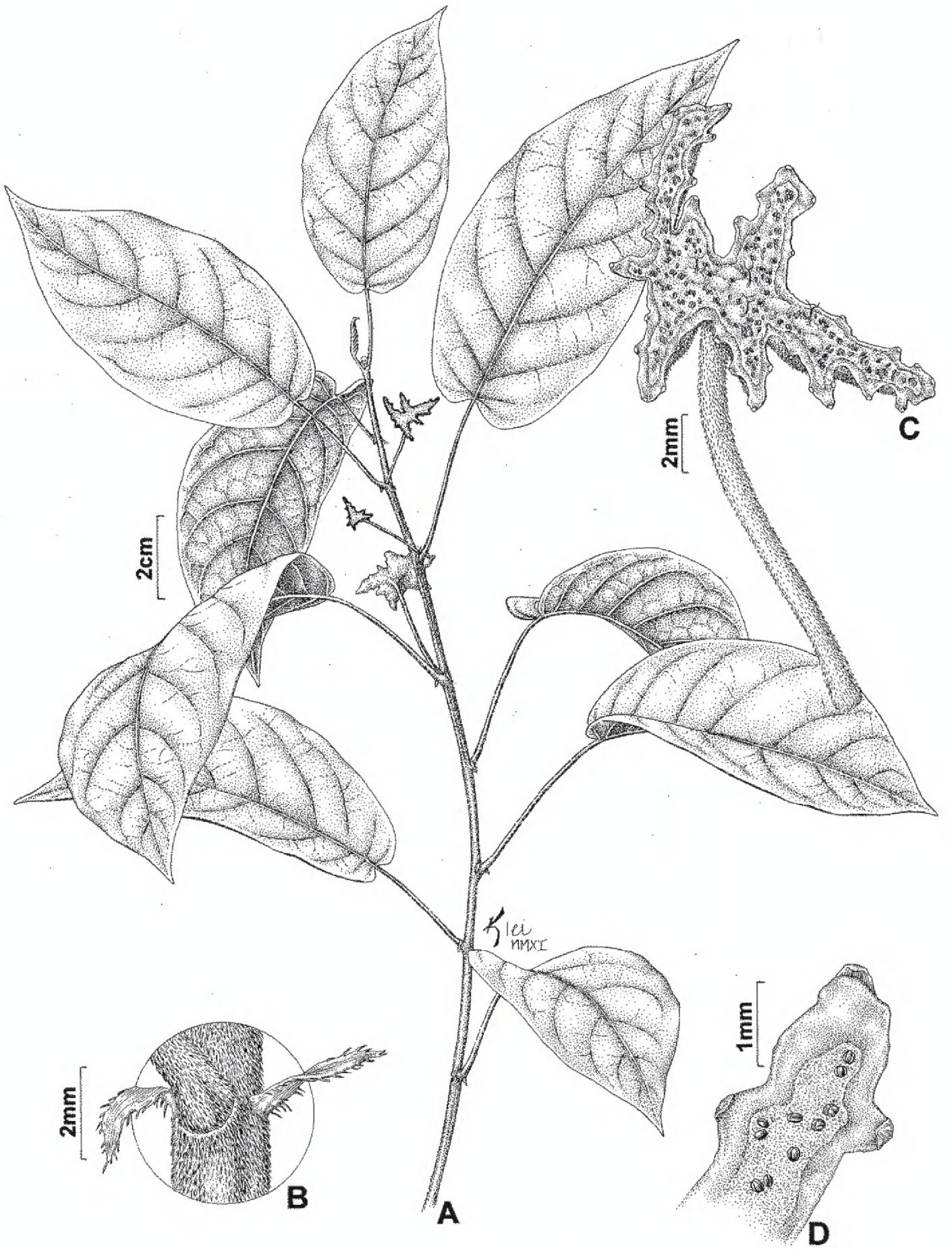

Figure 1. *Dorstenia stellaris* A.Sant. & Romaniuc **A** habit **B** ciliate stipule **C** stellate coenanthium **D** inflorescence, detail of coenanthium fringes and bracts on the angles of the coenanthium margin. (*A. Santos* et al. 142).

Pistilate flowers distributed through the whole coenanthium: perianth short lobed, whit apex minutely 2–3 lobed, puberulous; stigma 0.5–1 mm long., slender, white. Drupes elliptical, endocarp smooth to verrucosus; stigmas persistent. Seeds with a flat testa.

Figure 2. *Dorstenia stellaris* inflorescence, detail of coenanthium (photo: A. Santos 2011).

Table 1. Morphological comparison between *Dorstenia* species related to *D. stellaris*.

Taxa	stellate coenanthium	angulate coenanthium	rounded coenanthium	subulate stipule	base cordate leaves	base acute leaves
D. stellaris	x			x	x	
D. bowmaniana		x		x		x
D. carautae		x		x		x
D. milaneziana			x	x	x	
D. setosa			x	x	x	

Phenology. Collected with flowers in march and november, and fruits in march.

Ecology. *Dorstenia stellaris* is a camephyte from shady and moist areas within the Atlantic forest, which occur in litter soils, near waterfalls inside forests of the type locality.

Similar species. The angulate shape of *D. bowmaniana,* and *D. carautae* coenanthium is similar to that *D. stellaris*, however, the differs on the strongly irregularly-stellate coenanthium and on the cordate leaves. *D. milaneziana* and *D. setosa* are also similar to *D. stellaris* by the cordate leaves, however, they differ from *D. stellaris* by the rounded coenanthium. The other species of the *Lecanium* section are mostly orbicular to elliptic coenanthium.

Distribution and conservation status. As *D. stellaris* is a newly described and very restricted taxon occurring in a non-conserved area, it warrants special attention with regard to its conservation status. This species has only been found within its type locality in small populations. We believe, indeed, that this species is endangered and following IUCN (2011) criteria we recommend its classification within the endangered status of conservation (EN).

Etymology. *stellaris* epithet refers to the irregularly-stellate shape of the coenanthium.

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